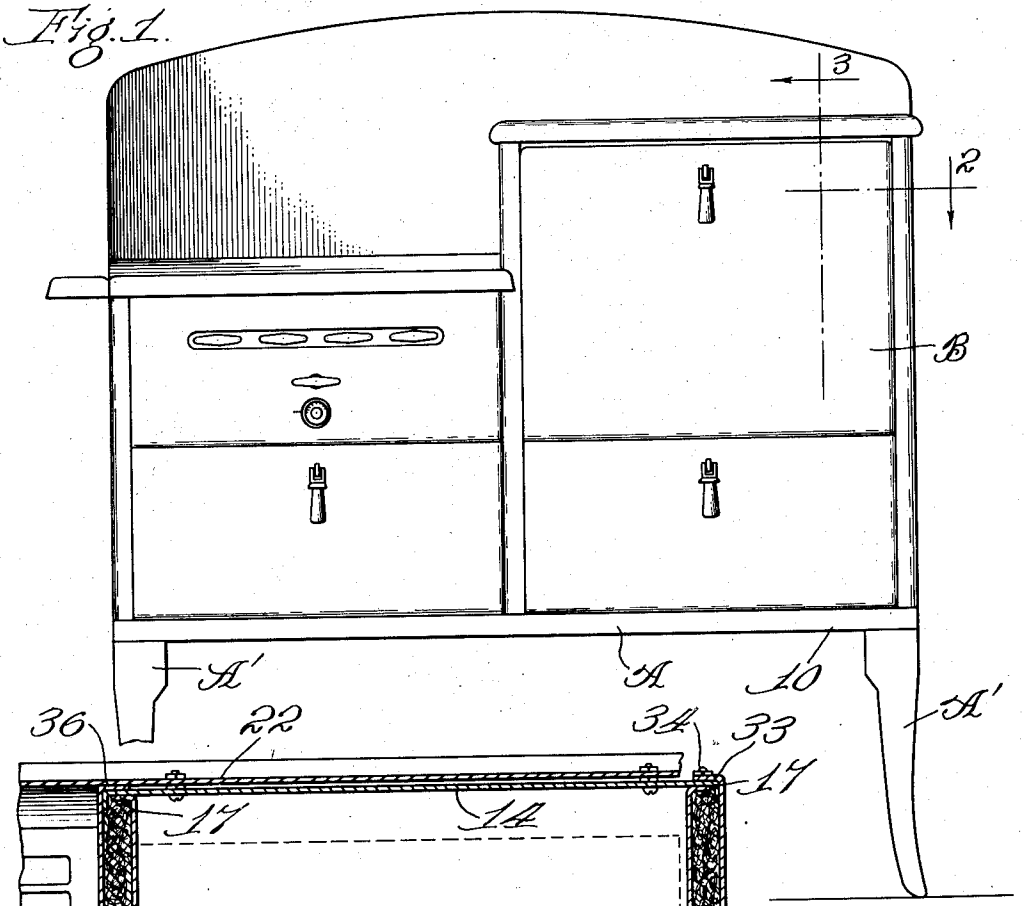
Dec. 8, 1936. G. D. WILKINSON ET AL 2,063,647

RANGE

Filed Jan. 23, 1933 3 Sheets-Sheet 1

Fig. 1.



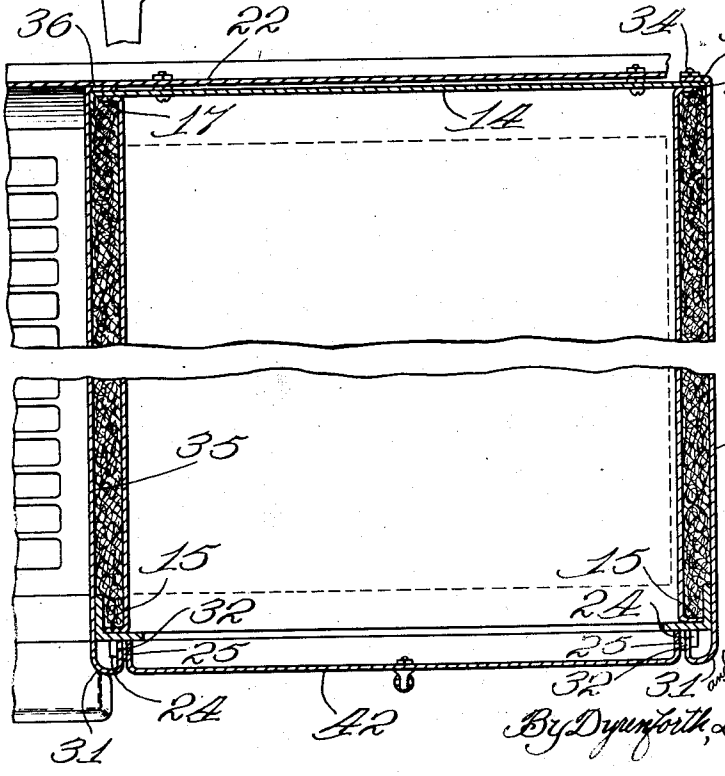




Fig. 2.




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RANGE

Filed Jan. 23, 1933 3 Sheets-Sheet 2

Fig. 3.

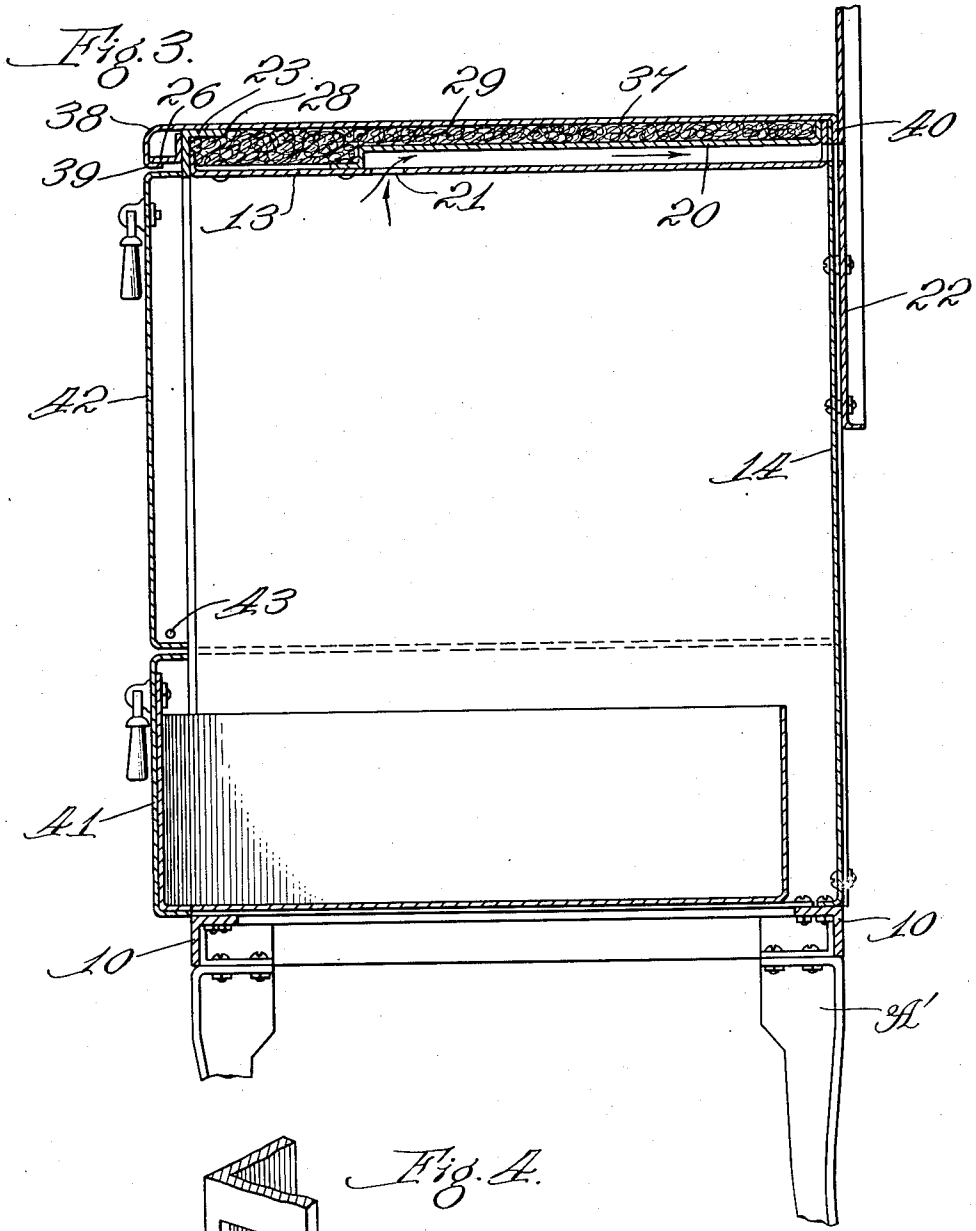
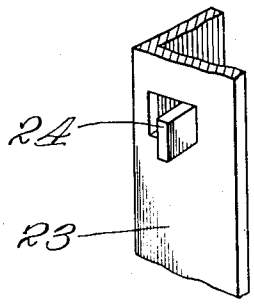



Fig. 4.




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RANGE

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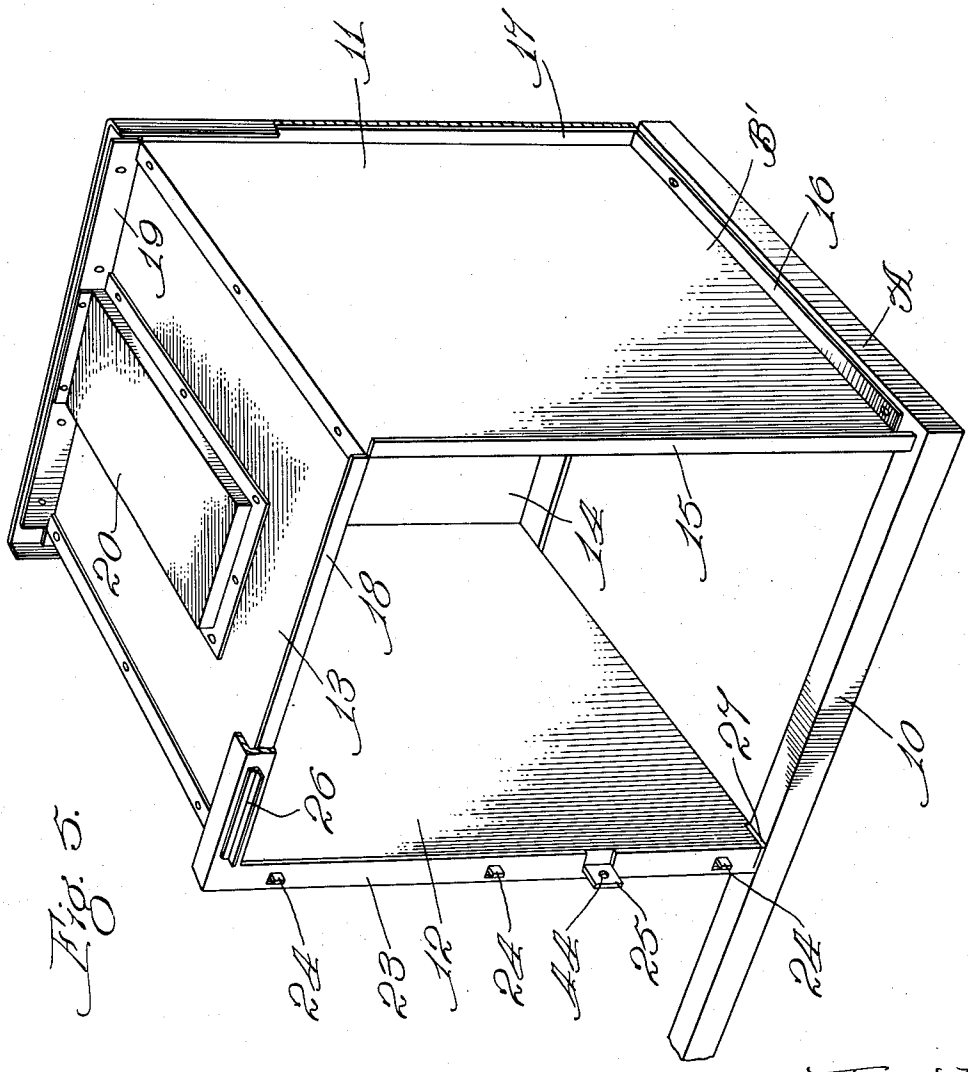



Fig. 5.

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# UNITED STATES PATENT OFFICE

2,063,647

## RANGE

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Application January 23, 1933, Serial No. 653,198

2 Claims. (Cl. 126—39)

This invention relates to a range and more particularly to the oven or compartment construction thereof.

One of the main difficulties with ranges heretofore manufactured is that the outer enameled walls have been so constructed as to be subjected to strain and stress during shipment and handling. As a result, portions of the enamel tend to chip, thus depreciating the value of the range or requiring the substitution of a new wall. In the installation of a new wall, a considerable part of the range has to be taken apart and much expense is involved. An object of our invention is to construct a range in such a manner that the outer enameled walls are relieved of strain and carry substantially no weight; at the same time, we provide enameled walls which are readily removable for repair purposes.

Another object of our invention is to provide outer oven-walls which will extend about the front corners of the range so as to form smooth rounded borders, i. e. a smooth continuous wall extending from the front face of the range to the rear thereof. A further object is to construct an inner oven-frame, sturdily secured to the main frame and providing a recess in which a blanket of insulation may be laid covering a plurality of sides of the oven. Other specific objects and advantages will appear as the specification proceeds. The invention is illustrated, in a preferred embodiment, in the accompanying drawings, in which—

Figure 1 is a broken front view in elevation of a range embodying my invention; Fig. 2, an enlarged broken sectional view, the section being taken as indicated at line 2 of Fig. 1; Fig. 3, an enlarged broken sectional view, the section being taken as indicated at line 3 of Fig. 1; Fig. 4, a broken perspective view of a portion of the front border plate; and Fig. 5, a broken perspective view of the oven casing or frame.

In the illustration given, A designates a base frame supported upon legs A'; and B designates an oven carried by frame A.

The frame A may be of any suitable construction. In the illustration given, it comprises a rectangular frame formed of angle iron strips 10, the upper flange of the angle iron being substantially horizontal.

In forming the oven B, I prefer to construct an inner oven-frame or casing B' and to secure it directly to frame A. The frame B' should be sturdy in construction and firmly secured to frame A so that substantially all strain will be carried by the casing, and the removable outer enameled walls, which will be described later, relieved of stress. In the illustration given, the casing B' is provided with an outer side wall 11, an inner side wall 12, a top wall 13, and a rear wall 14. It has been found satisfactory to construct the walls of sheet metal. As shown more clearly in Figs. 2 and 5, the walls 11 and 12 are provided with outwardly turned forward flanges 15, outwardly turned bottom flanges 16, and outwardly turned rear flanges 17. The top wall 13 is provided with a short upwardly turned forward flange 18 and a higher upwardly turned rear flange 19.

Mounted upon the wall 13 is a flue compartment 20 having an open rear wall communicating with ports in the rear wall of the range through which the oven gases may be discharged. Communication between the oven and the compartment 20 is established through opening 21 in the top wall 13. Bolted to the rear wall 14 is a back splasher wall 22, which may be of well known construction.

In order to provide means for releasably locking the enameled walls to the inner oven structure B', I prefer to secure, at the front of the casing B', a front border plate 23. As shown more clearly in Figs. 2, 3 and 5, the plate 23 is preferably formed of angle iron and on its front side, has forwardly projecting lugs 24 struck from the body of the plate. We also prefer to strike from the body of the plate hinged supports 25, preferably spaced inwardly of the lugs 24 and on opposite sides of the oven. Secured to the top strip of the front plate 23 is an angle iron flange 26 which serves to support the top enameled wall of the range. We prefer to secure the front plate 23 directly to the frame A, and this may be accomplished by turning the bottom portions of member 23 inwardly to form flanges 27. The flanges 27, as shown more clearly in Figs. 3 and 5, extend under the forward portion of walls 11 and 12 and rest directly upon the horizontal wall of the angle iron 10 to which they may be secured by spot welding or other suitable means.

The upper wall of the plate 23 is also turned inwardly to form flanges 28. With the construction shown, it will be noted that the upper portion of plate 23 forms with the rear flange 19 a chamber for insulation while, at the same time, flanges 15, 16 and 17 of the side walls 11 and 12 form insulation chambers which are continuous with the top insulation chamber. In other words, an insulation blanket 29 may be wrapped completely around the casing B', thus obviating the necessity of dividing it into separate panels and

avoiding broken corners through which heat units may escape.

The removable enameled walls will now be described. As shown more clearly in Fig. 2, the outer enameled wall 30 is provided near its forward end with a curved border portion 31 and an inwardly extending flange 32. The flange 32 extends between the lugs 25 and the hinge member 24. At its rear side, the member 30 is turned inwardly to form the right angle flange 33. A single bolt 34, extended through the flange 17, rear wall 14 and flange 33, serves to lock the wall 30 rigidly in position. The inner enameled wall 35 is constructed like wall 30, having at its forward end a curved corner portion 31 and an inwardly turned flange 32, the flange 32 extending between lugs 24 and the hinged lug 25. At its rear, the member 35 is provided with an inwardly turned flange 36 which may be pressed between the rear wall 13 and the back splasher wall 22 to lock the enameled wall 35 in position. The top enameled wall 37, as shown more clearly in Fig. 3, is provided at its front with a curved corner portion 38 and an inwardly turned flange 39. The flange 39 extends below and locks against the angle iron member 26. At its rear, the wall 37 has a downwardly turned flange 40 which may be pressed between the wall 22 and rear wall 14 to lock the top wall 37 in position.

The oven B may be divided into any number of suitable compartments. In the illustration given, a drawer 41 is mounted in the lower part of the compartment and a door 42 is pivotally mounted to close the upper compartment, a suitable floor (not shown) being provided between the two compartments. The door 42 is provided at its sides with pins or trunnions 43 which engage the openings 44 in the hinge lugs 25. With the construction illustrated, it will be noted that the hinge elements 25 serve not only as supports for door 42, but also as means for locking the inwardly turned flanges 32 of walls 30 and 35 against the attachment lugs 24.

In the course of construction of the range, the inner casing or frame B' is secured directly to frame A by spot welding or other suitable means. The blanket of insulation 29 is then extended from one side of the oven across the top and down the other side so as to completely fill the insulation chambers formed by flanges 15, 16 and 17 of sides 11 and 12 and flanges 19 and 18 of top wall 13. After the insulation is placed in position, the side wall 35 may be placed in position by drawing the flange 32 between lugs 24 and 25 and pressing the flange 36 between walls 14 and 22. The outer enameled wall 30 may be drawn rearwardly to extend flange 32 between lugs 24 and 25 and the rear flange 33 secured to wall 14 by bolt 34. The top wall 37 may be secured in position by drawing the wall rearwardly so as to extend flange 39 below flange 26 and then pressing downwardly the flange 40 between walls 14 and 22. If it should become necessary to remove one of the enameled walls, for repair or replacement, this may be readily accomplished by freeing the rear flange of the wall and then moving the wall forwardly to disengage the interlocking flanges at the front of the oven.

The construction of the remainder of the range, as illustrated in Fig. 1, has not been described because it does not enter into the present invention. While, in the illustration given, the oven B has been described in connection with a tiffen or buffet type of range, it will be understood that it is employed also with the table top range.

The foregoing detailed description has been given for clearness of understanding only, and no unnecessary limitations should be understood therefrom, but the appended claims should be construed as broadly as permissible, in view of the prior art.

We claim:

1. In a range, a base frame, an oven-frame mounted thereon, a front plate secured at the front of said oven-frame, said plate having struck therefrom attachment lugs at least one of which is spaced forward of the others, and walls for said oven-frame, at least one of said walls having a turned forward end with an inwardly extending lip adapted to extend between the attachment lugs.

2. In a range, a base frame, an oven-frame mounted thereon, a front frame plate secured at the front of said oven-frame, said plate having struck therefrom attachment lugs and inwardly positioned hinge lugs, a door hingedly supported by said hinge lugs, and walls for said oven-frame, at least one of said walls having a turned forward flange adapted to be gripped between said attachment and hinge lugs.

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